

EXPLANATION

Geochemically anomalous areas—Insoluble-residue samples from each drill hole in dark-shaded areas contain greater than 5,000 anomalous metal feet (AMF); in light-shaded areas, 3,000–5,000 AMF

Location of drill hole

Areas having resource potential for Mississippi Valley-type deposits in the Springfield $1^{\circ} \times 2^{\circ}$ quadrangle [Definitions of potential: High, Known or suspected presence of dolomite, faults, >5,000 anomalous metal feet (AMF). Moderate, Known or suspected presence of dolomite, faults, 3,000-5,000 AMF, except area B-7, which is considered to have moderate potential because a limestone-dolomite interface is present in the Bonneterre-Davis interval. The AMF values for drill holes in this area, however, are very low. Low, Known or suspected presence of limestone, shale, siltstone, sandstone, and (or) <2,000 AMF]

Area	Permissive stratigraphic intervals	Potential	Comment
A-1	Upper 90 percent of post-Bonneterre Cambrian (PBC)	High	
	Ordovician	High	
A-2	Upper 90 percent of PBC except for an interval of 10 ft thick or more at 0.7 of the distance from the top of the PBC to the base (70-percent level)	High	
A-3	Ordovician and Mississippian Upper 60 percent of PBC	High High	
,,,	Ordovician and Mississippian	High	PBC rocks have high potential in all "A" areas and moderate potential in all "B" areas, except B-7, for large deposits of complex ores of Pb, Zn, Cu, Ni, Co, Mo, Ag.
A-4	Upper 50 percent of PBC Ordovician and Mississippian	High High	
B-1	Upper 90 percent of PBC Ordovician	Moderate Moderate	Ordovician and Mississippian rocks, where present, have high potential in "A" areas and moderate potential in "B" areas, except B-7, for small fault- and (or) fracture-controlled zinc-lead deposits similar to known occurrences in the quadrangle.
B-2	Upper 90 percent of PBC except for a 10-ft (or thicker) interval at 70-percent level	Moderate	
	Ordovician	Moderate	
B-3	Upper 60 percent of PBC in southern block; upper 80 percent except for 10-ft (or thicker) interval at 70-percent level in northern block	Moderate	
D 4	Ordovician	Moderate	
B-4	Upper 60 percent of PBC Ordovician and Mississippian	Moderate Moderate	
B-5	Upper 50 percent of PBC Ordovician and Mississippian	Moderate Moderate	
B-6	Upper 80 percent of PBC	Moderate	
B-7	Bonneterre and Davis Formations	Moderate	East boundary of B-7 is limestone-dolomite interface in Bonneterre-Davis interval; dolomite to the west.
C-1	PBC and Ordovician	Low	Bonneterre and Davis Formations are either limestone or shaly basin facies. PBC and Ordovician dolomites have very low AMF values (<1,800). Mississippian not present
C-2	Cambrian and Ordovician	Low	Dolomites of the Bonneterre and Davis more than 5 mi from limestone-dolomite interface. PBC and Ordovician rocks have very low AMF values. Low fault density. Mississippian rocks not present.
C-3	PBC, Ordovician, and Mississippian	Unknown	Insufficient information to determine if a potential exists except that Bonneterre and Davis or equivalents probably are sandstone, siltstone, and shale.
C-4	PBC Ordovician and Mississippian	Low Moderate	Bonneterre and Davis or equivalents are clastic basin facies. PBC has <1,000 AMF; moderate potential in Ordovician and Mississippian for small fault- and (or) fracture-controlled zinc-lead deposits.